

Notice of Allowability

Application No.

10/755,020

Examiner

Srirama Channavajjala

Applicant(s)

HITZ ET AL.

Art Unit

2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to 10/27/2006.
2. ☐ The allowed claim(s) is/are 1-10,20-30 and 33-49 [re-numbered as: 1-38].
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 11/14/2006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other See Continuation Sheet.

Continuation of Attachment(s) 9. Other: Drawing, Fig 6-7 filed on 10/27/2006, are approved, a copy enclosed with this office action..

DETAILED ACTION

1. Claims 1-10,20-30,33-49 are allowed
2. Examiner acknowledges applicant's amendment filed on 10/27/2006.
3. Claims 1,13,20,34,39 have been amended [10/27/2006].
4. Claims 48-49 status was corrected through Examiner's amendment as "**previously presented**", instead (*currently amended*), claims **13 through 19** are cancelled. [see PTOL-413B]
5. Examiner acknowledges applicant's amendment to claims 1,13,20,34,39,48-49,52 filed on 12/6/2004.
6. Claims 11-12,31-32, 50-51, 58 have been cancelled [12/6/2004].

Drawings

7. In view of applicant submitted drawings fig 6 and fig 7, the drawings are objected to under 37 CFR 1.83(a) in the previous office action is hereby withdrawn, **fig 6- 7** are approved, and acceptable for examination purpose, a copy of the approved fig 6 and 7 is herewith enclosed with this office action.

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8. The Drawings filed on 1/8/2004 are acceptable for examination purpose.

Information Disclosure Statement

9. The information disclosure statement filed on ***1/8/2004*** is in compliance with the provisions of 37 CFR 1.97, and has been considered and a copy was enclosed with previous Office Action mailed on 7/27/2006.

Interview:

10. Applicant's Attorney Jordan M. Becker, Reg.No. 39,602 is thanked for the telephone interview on 14 November 2006. During that telephone interview Jordan M. Becker granted authorization to ***amend claims 48-49 status*** from "***Currently amended***" to "***Previously presented***"; also canceling ***claims 13 through 19***.

EXAMINER'S AMENDMENT

11. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it ***MUST*** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicant's Jordan M. Becker, Reg.No. 39,602 on 14 November 2006.

The application has been amended as follows:

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Please amend the claims which was filed on 10/27/2006:

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

48. (~~Currently amended~~ Previously presented) A storage server as recited in claim 39, wherein the memory further contains code which, when executed by the processor, causes the data storage server to execute a third process, said third process comprising:

saving an uncompressed version of the portion of the set of data in a memory in the data storage system after said compressing; and

in response to a subsequent read on the portion of the set of data, using the uncompressed version from the memory to fulfill the request, without decompressing the portion of the set of data.

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49. (~~Currently amended~~ Previously presented) A storage server as recited in claim 39, wherein the memory further contains code which, when executed by the processor, causes the data storage server to execute a third process, said third process comprising:

receiving a read request;

in response to the read request, determining that the read request relates to at least one subset of the set of data;

scanning the compression group to determine whether any entry in the compression group contains the predetermined value; and

upon detecting the predetermined value in any of the entries in the compression group, immediately beginning decompression of the set of data.

In the Title:

Pursuant to MPEP 606.01 the Title is changed to read

**--IN A DATA STORAGE SERVER, FOR EACH SUBSETS WHICH DOES NOT
CONTAIN COMPRESSED DATA AFTER THE COMPRESSION, A PREDETERMINED
VALUE IS STORED IN THE CORRESPONDING ENTRY OF THE CORRESPONDING
COMPRESSION GROUP TO INDICATE THAT CORRESPONDING DATA IS
COMPRESSED--**

Reasons for allowance

Claims **1-10,20-30,33-49** are allowed

The following is an examiner's statement of reasons for indication of allowable subject matter: The prior art of record does not disclose, make obvious, or otherwise suggest the structure of the applicant's *"for each of the subsets which does not contain compressed data after said compressing, storing a predetermined value in the corresponding entry of the compression group, the predetermined value being indicative that corresponding data is compressed, in claim 1,39;*

"for each of the number of consecutive blocks which does not contain compressed data after said compressing, storing a predetermined block number in the corresponding entry of the compression group, the predetermined block number being indicative that corresponding data is compressed and represented elsewhere in the compression group", in claim 20;

"for each block which does not contain compressed data after said compressing, storing a predetermined block number in the corresponding entry of the compression group, the predetermined block number being indicative that corresponding data is compressed and represented elsewhere in the compression group", in claim 34.

These features, together with the other limitations of the independent claims are novel and non-obvious over the prior art of record. The dependent claims 2-10, 21-30,33,35-38, 40-49 being definite, enabled by the specification, and further limiting to the independent claims are also allowable.

The newly cited reference issued to Ivie, James, WO 2006/063057 published on June 15, 2006 is directed to multiple compression algorithms in database system, more specifically, inter-row compression to be used with fixed-page sizes in a page-based database, when the page data is no longer needed, the compression plug-in compresses the page data using inter-row compression, and passes the compressed page data from the page buffer to the corresponding page, which is fixed in size in substorage [see Abstract], ie., the compression plug-in identifies if there is sufficient kspace in the page in sub storage to store the data in the page buffer. If there is sufficient space to store the intra-row and inter-row compressed data from the page buffer to the page in sub-storage, the compressed data from the page buffer is saved into the page in the sub-storage. If there is too much data to fit into the page in the sub-storage, the page buffer is split into one or more additional page buffers, as required and one or more corresponding fixed-size pages are also created in the sub-storage.[see page 5, line 20-27, fig 2, fig 4].

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

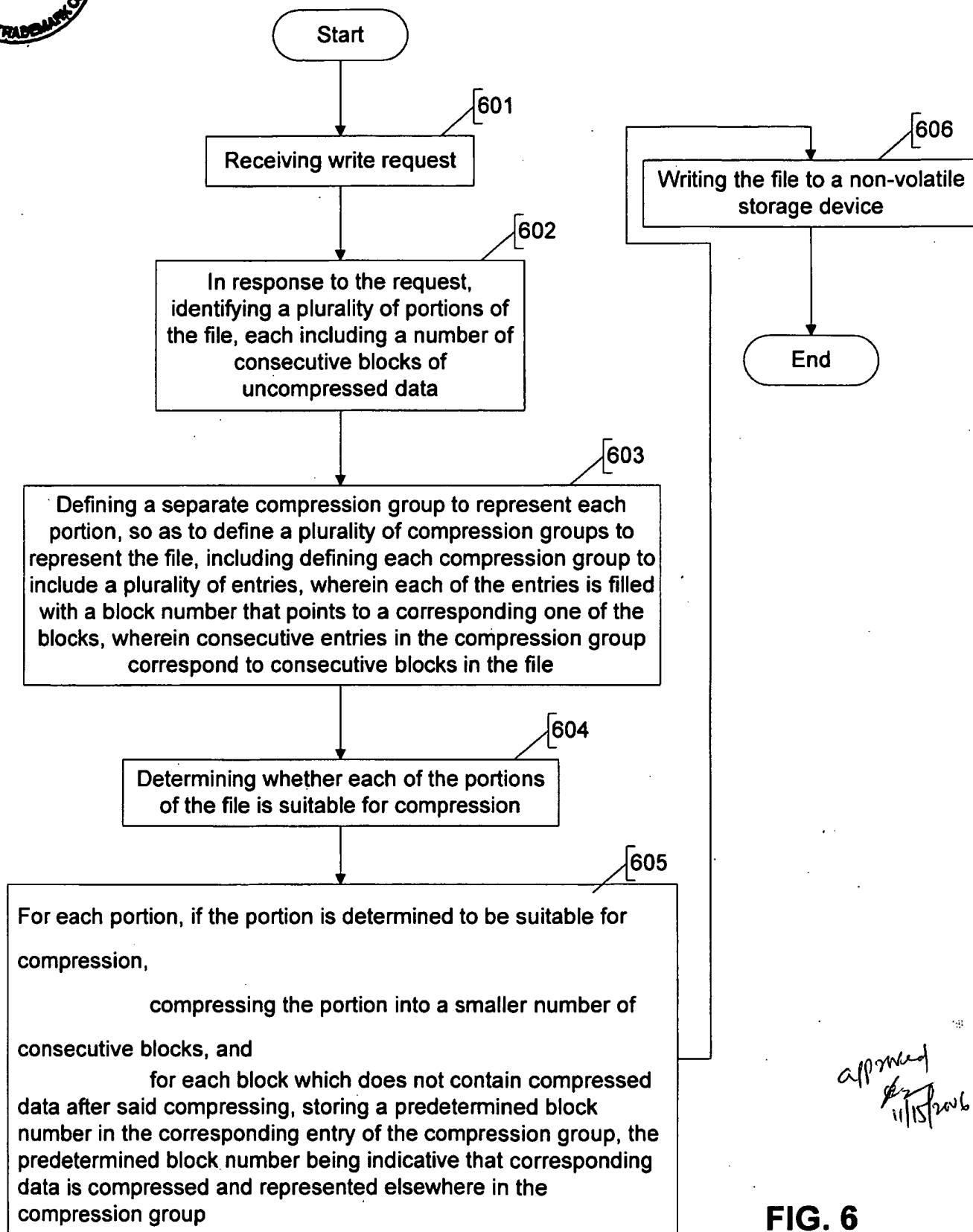
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam, Hosain, T, can be reached on (571) 272-3978. The fax phone numbers for the organization where the application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

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Patent Examiner.

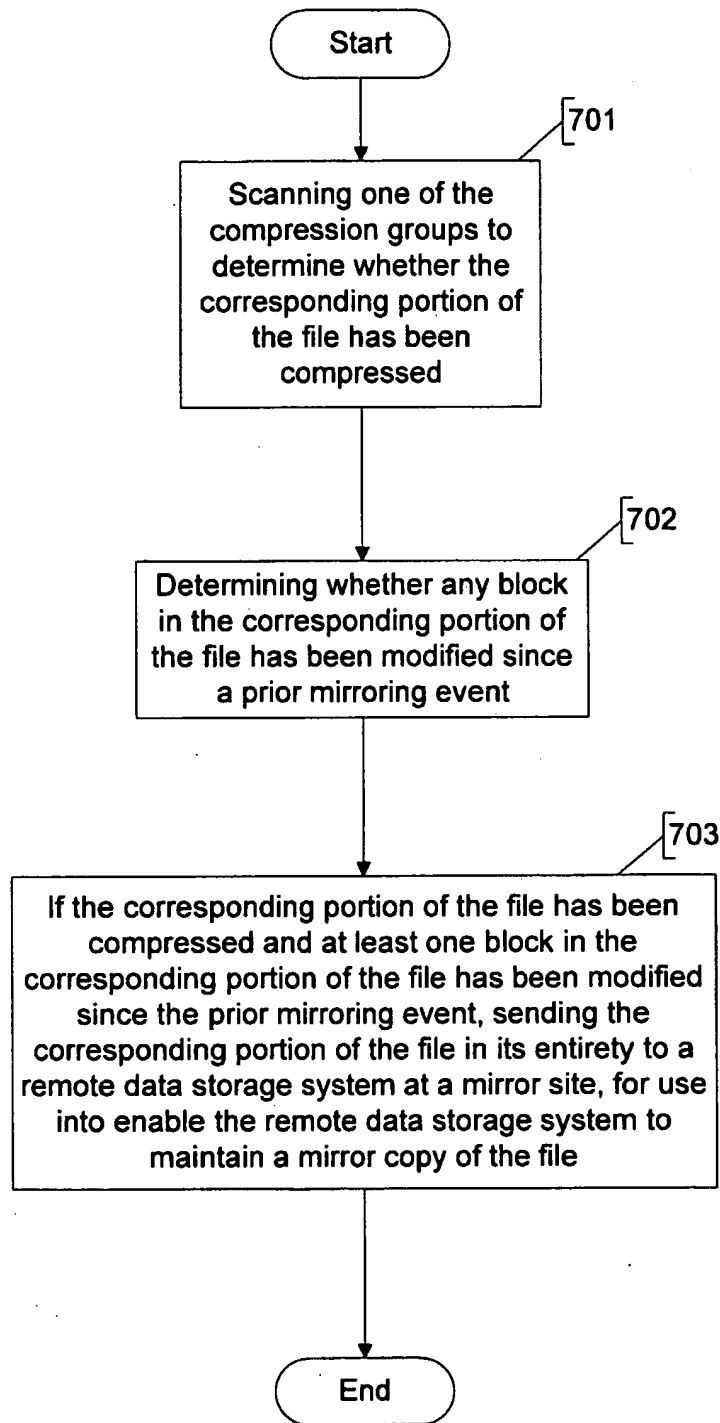
November 15, 2006.


SRIRAMA CHANNAVALJALA
PRIMARY EXAMINER



approved
11/15/2006

FIG. 6



*approved
du
11/15/2006*

FIG. 7